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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,992	01/03/2001	Sanjay Khanna	RSW919990130US1	1791

7590   12/19/2002

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EXAMINER
CHEN, CHONGSHAN

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr>
<td colspan="2" rowspan="2">

Office Action Summary</td>
<td>**Application No.**</td>
<td>**Applicant(s)**</td>
</tr>
<tr>
<td>09/753,992</td>
<td>KHANNA ET AL.</td>
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<td>**Examiner**</td>
<td>**Art Unit**</td>
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<td>Chongshan Chen</td>
<td>2172</td>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claim 17 is rejected under 35 U.S.C. 102(e) as being anticipated by Gorelik et al. ["Gorelik", Pub. No.: US2002/0004799].

Regarding to claim 17, Gorelik discloses a method of serializing access to data structures in a computing system, comprising steps of:

maintaining two data structures, a first of which is used for one or more concurrent searches and a second of which is used for an update operation; switching the two data structures after performing the update operation; and synchronizing the two data structures such that both reflect the update operation (Gorelik, page 1, [0008]-[0010]).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

4.   Claims 1, 3-6, 8-11, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gorelik et al. ["Gorelik", Pub. No.: US 2002/00004799] in view of Edwards et

al. ["Edwards", 6,353,820].

Regarding to claim 1, Gorelik discloses a computer program product for serializing data

structure retrievals and updates, the computer program product embodied on one or more

computer-readable media and comprising:

computer-readable program code means for creating two identical databases, each

representing an initial state for accessing stored data; computer-readable program code means for

performing searches against a first of the two databases; computer-readable program code means

for performing a first update against a second of the two databases, yielding a revised database;

computer-readable program code means for switching the first database and the revised database,

such that the first database becomes the second database and the revised database becomes the

first database; computer-readable program code means for performing, after operation of the

computer-readable program code means for switching, a second update against the second

database, yielding a synchronized database that is structurally identical to the first database; and

computer-readable program code means for performing subsequent searches against the first

database (Gorelik, page 1, [0008]-[0010]).

Gorelik does not explicitly disclose the database is tree structure. Edwards discloses

database can be built as tree structure (Edwards, col. 8, lines 23-34). Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to combine the

method of Gorelik with the method of Edwards in order to improve search time.

Regarding to claim 3, Gorelik and Edwards teach all the claimed subject matters as

discussed in claim 1, and further discloses atomic transactions are used to maintain proper

synchronization between the first tree and the second tree (Gorelik, page 2, [0036]).

Regarding to claim 4, Gorelik and Edwards teach all the claimed subject matters as

discussed in claim 1, and further discloses performing the first update further comprises

computer-readable program code means for queuing a transaction, and wherein the computer-

readable program code means for performing the second update further comprises computer-

readable program code means for applying the queued transaction against the second tree that

results from operation of the computer-readable program code means for switching (Gorelik,

page 2, [0029]).

Regarding to claim 5, Gorelik and Edwards teach all the claimed subject matters as

discussed in claim 1, and further discloses computer readable program code means for

performing a subsequent update against the synchronized tree that results from operation of the

computer-readable program code means for performing the second update; and wherein

operation of the computer-readable program code means for performing the subsequent update

causes another operation of the computer-readable program code means for switching (Gorelik, page 2, [0023], [0036]).

Claims 6 and 8-10 are rejected on grounds corresponding to the reasons given above for claims 1 and 3-5.

Claims 11 and 13-15 are rejected on grounds corresponding to the reasons given above for claims 1 and 3-5.

Regarding to claim 16, Gorelik discloses a method of serializing access to data structures in a computing system, comprising steps of:

maintaining two databases, a first of which is used for one or more concurrent searches and a second of which is used for an update operation; switching the two databases after performing the update operation; and synchronizing the two databases such that both reflect the update operation (Gorelik, page 1, [0008]-[0010]).

Gorelik does not explicitly disclose the database is tree structure. Edwards discloses database can be built as tree structure (Edwards, col. 8, lines 23-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of Gorelik with the method of Edwards in order to improve search time.

Regarding to claim 18, Gorelik teaches all the claimed subject matters as discussed in claim 17, except for explicitly disclosing the two data structures are B-trees. Edwards discloses the data structure is B-tree (Edwards, col. 8, lines 23-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of Gorelik with the method of Edwards in order to improve search time.

5.   Claims 2, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gorelik et al. ["Gorelik", Pub. No.: US 2002/00004799] in view of Edwards et al. ["Edwards",

6,353,820] and further in view of Bretl et al. ["Bretl", 6,360,219].

Regarding to claim 2, Gorelik and Edwards teach all the claimed subject matters as

discussed in claim 1, except for explicitly disclosing computer-readable program code means for

obtaining an exclusive lock prior to operation of the computer-readable program code means for

performing the first update; and computer-readable program code means for releasing the

exclusive lock after operation of the computer-readable program code means for performing the

second update and the computer-readable program code means for switching. Bretl discloses

obtaining a lock prior to update, and releasing the lock after update (Bretl, col. 1, lines 27-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the methods of Gorelik, Edwards and Bretl in order to prevent read and

write happening at the same time.

Claims 7 and 12 are rejected on grounds corresponding to the reasons given above for

claim 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chongshan Chen whose telephone number is (703) 305-8319.

The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Y Vu can be reached on (703)305-4393. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 746-7239 for regular

communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)305-3900.

CC
December 13, 2002

JEAN M. CORRIELUS
PRIMARY EXAMINER